

SWAC C&D Subcommittee Meeting

MassDEP Bureau of Air & Waste

June 22, 2017: 9:30 AM – 11:30 AM

One Winter Street, Boston

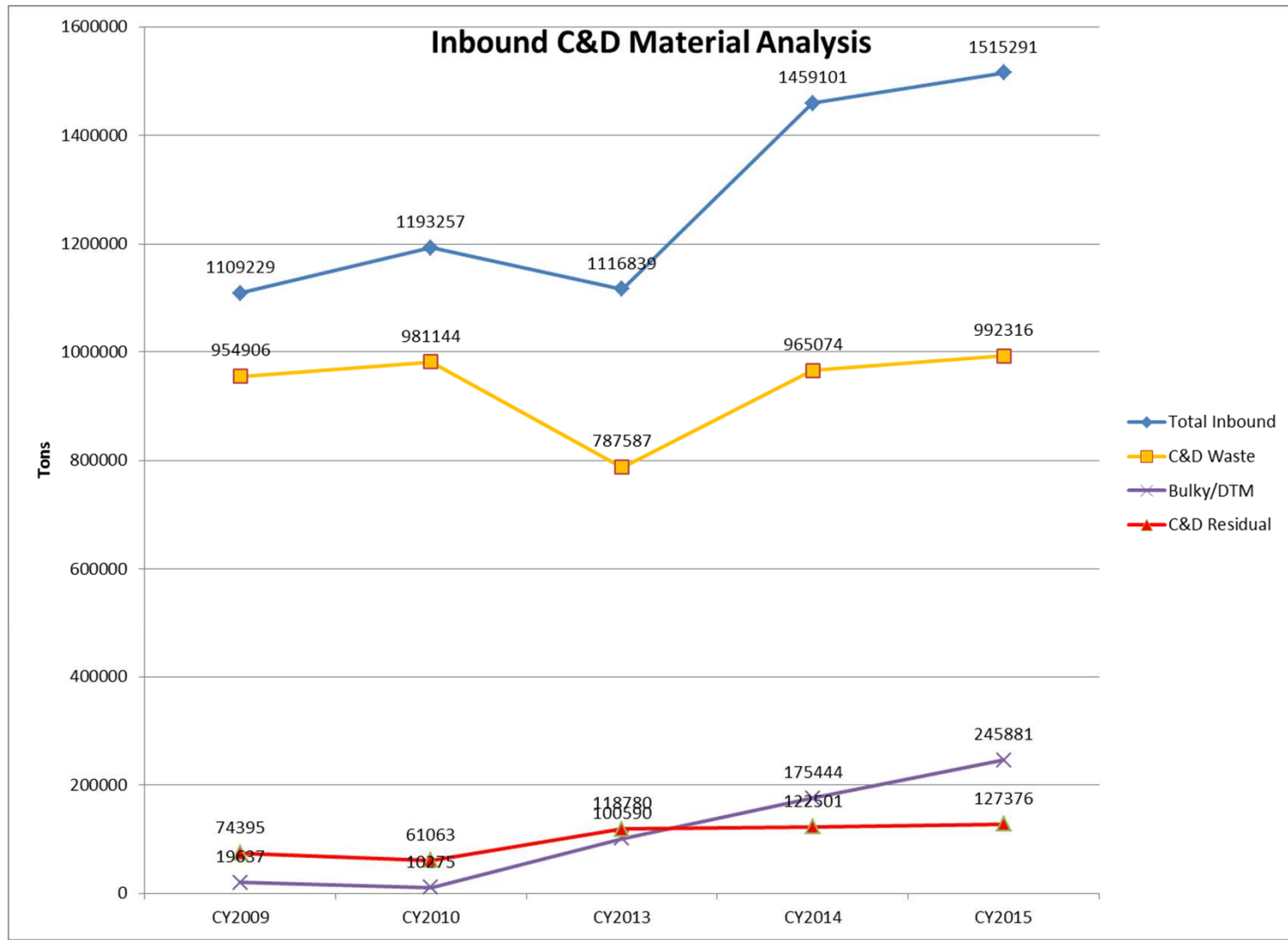


Agenda

- Welcome/Introductions
- Inbound C&D Materials Trends over time
- C&D Facility Performance Standards
- 2010 - 2020 Solid Waste Master Plan – review proposed C&D objectives and actions
- Proposed modifications to recycling/diversion rate methodology
- Announcements
- Next Steps/Closing

Inbound C&D Materials Trends – Facility Performance Standards

Inbound C&D Materials Trend Plot



C&D Transfer Station Performance Standard

Inbound Materials

- C&D Waste ->
 1. Separate clean gypsum wallboard
 2. Kick-sort option to separate easily recovered recyclable materials (typically yields 5% to 10% recovery)
 3. Transfer remaining C&D Waste to C&D processor for further processing (typically yields 30% to 40% recovery)
- Source separated recyclables (gypsum wallboard, metal, etc.) ->
 - Deliver to end-markets for recycling/re-use
- C&D Residuals ->
 1. No separation required
 2. No Value; Load for disposal
- Bulky/DTM ->
 1. Separate waste ban items
 2. Load for disposal

C&D Processor Performance Standard

Inbound Materials

- C&D Waste ->
 - Separate clean gypsum wallboard
 - Mechanical sorting/separation; Manual picking line (typically yields 30% to 40% recovery)
 - Deliver processed materials to end-markets for recycling/re-use
- Source separated recyclables (e.g. C&D Wood, gypsum wallboard, asphalt shingles, carpet, cardboard, tires etc.) ->
 - Negative pick contaminants; sort and size to end-market specs
 - Deliver to end-markets for recycling/re-use
- Bulky/DTM ->
 - Separate waste ban items
 - Load for disposal
- C&D Residuals ->
 - No value; load/transfer for disposal

2010 - 2020 Solid Waste Master Plan – review proposed
C&D objectives and actions

2010 - 2020 Solid Waste Master Plan:

C&D Materials Diversion and Market Development

- **Objective**
 - Increase recycling rate for C&D materials excluding ABC to 50% by 2020
 - Reduce C&D disposal and landfill dependent uses by 400,000 tpy by 2020
- **Current status**
 - As of CY2015
 - The C&D recycling rate was calculated at approximately 27% (DSM study)
 - The amount of C&D disposed had dropped by 270,000 tpy, from 670,000 tons in 2007 to 400,000 tons in 2015 (annual solid waste data).

2010 - 2020 Solid Waste Master Plan:

C&D Materials Diversion and Market Development

Action Item	Discussion
<ul style="list-style-type: none"> • Increase C&D Recycling at C&D Processors <ul style="list-style-type: none"> ○ Develop consistent recycling requirements and incorporate them into C&D recycling facility permits 	<ul style="list-style-type: none"> • Do we develop performance standards for C&D Processors and Large C&D Transfer Stations?
<ul style="list-style-type: none"> • Recycling Loan Fund <ul style="list-style-type: none"> ○ Make C&D materials a priority category for RLF projects ○ Pursue opportunities to apply other state economic development assistance programs to support growth in C&D recycling 	<ul style="list-style-type: none"> • RLF priority categories amended to include C&D • 2017 RBDG grant application included 2 materials highlighted in DSM C&D Market Study <ul style="list-style-type: none"> ○ C&D Wood ○ Post-consumer bulky rigid plastic
<ul style="list-style-type: none"> • C&D Material Specifications <ul style="list-style-type: none"> ○ Work with C&D industry to develop common specs for different categories of materials to facilitate consistent material streams for end markets 	<ul style="list-style-type: none"> • Do we develop specifications for common products and by-products generated by C&D processors (e.g. A-wood, B-wood, fines, residuals, ADC, landfill roadbase, animal bedding, WWTP sludge additive, etc.)?

For complete list of proposed C&D actions, see Section 3.5 of 2010-2020 SWMP:

<http://www.mass.gov/eea/agencies/massdep/recycle/reports/solid-waste-master-plan.html#1>

2010 - 2020 Solid Waste Master Plan:

C&D Materials Diversion and Market Development

Action Item	Discussion
<ul style="list-style-type: none"> Targeted Waste Bans <ul style="list-style-type: none"> Concurrent with market development, develop waste bans for: <ul style="list-style-type: none"> Gypsum wallboard Asphalt shingles Carpet Ceiling tiles 	<ul style="list-style-type: none"> New gypsum wallboard waste ban added 2011 <ul style="list-style-type: none"> Original market in Massachusetts failed (Gypsum Recycling of America) Existing market operates reliably in PA (USA Gypsum) New market just opened in Massachusetts (Mass Gypsum Recycling) Add other material waste bans?
<ul style="list-style-type: none"> C&D Source Separation <ul style="list-style-type: none"> Maximize the amount and value of materials recovery from C&D sites, including: <ul style="list-style-type: none"> Source separation Deconstruction Materials reuse Take into consideration project scale and cost 	<ul style="list-style-type: none"> RecyclingWorks in Massachusetts BMP Guide for generators of C&D materials (https://recyclingworksma.com/construction-demolition-materials-guidance/) posted April 2017

For complete list of proposed C&D actions, see Section 3.5 of 2010-2020 SWMP:

<http://www.mass.gov/eea/agencies/massdep/recycle/reports/solid-waste-master-plan.html#1>

Next Steps toward development of 2020 – 2030 SWMP

- October 2017 SWAC meeting
 - develop 2030 SWMP ideas and proposals
 - Including proposed C&D Action Plan
- January and April 2018
 - develop 2030 SWMP framework
- Questions or Additional Information
 - John Fischer, MassDEP
 - 617-292-5632
 - John.fischer@state.ma.us

Proposed modifications to recycling/diversion rate methodology

Recycling/Diversion Rate Calculation Methodology

- Historical “C&D Annual Report Summary” methodology:
 - “Recycled/Diverted” material
 - Excludes materials used in landfill dependent use applications (sometimes referred to as “BUD” material)
 - Alternative daily cover
 - Roadbase stabilization
 - Shaping and grading
 - Includes ABC recovered by C&D processors (not roads/bridges)*
 - Includes wood used as fuel at biomass boilers*
 - “Recycling/Diversion Rate” = (tons of C&D material recycled/diverted) / (tons handled)
 - Tons handled = total inbound materials received less tons transferred to another facility for further processing

* Not included in past MassDEP annual solid waste data updates (SWMP progress reports)

Recycling/Diversion Rate Calculation Methodology (Cont'd)

- DSM methodology in 2016 C&D Debris Market Study
 - Focused on measuring effectiveness of processors at recovering recyclable materials from mixed C&D waste
 - Eliminated double counting to extent possible
 - Transferred material sent to in-state processor
 - Used MassDEP definition of recycled/diverted material
 - Adjusted Denominator of recycling rate by removing:
 - Inbound Bulky/DTM
 - Inbound Residual
 - Inbound source separated material (e.g. ABC, Wood, Metal, etc.)
 - Transferred material sent out-of-state

Recycling/Diversion Rate Calculation Methodology (Cont'd)

- Options for MassDEP going forward
 - Propose a modified DSM method
 - Base recycling rate on inbound “C&D Waste” handled
 - Leave numerator unchanged (“Recycled/Diverted Material”)
 - Adjust denominator to reflect Handled “C&D Waste” only
 - Remove “Bulky/DTM” reported in inbound materials
 - Remove “Fines/Residual” reported in inbound materials
 - Eliminate double-counting to extent possible
 - » Continue historical practice of deducting “Transferred” tons

Comparison of Current vs. Proposed Recycling/Diversion Rate Methodology

	Total Inbound accepted	Inbound C&D Waste	Inbound ABC and SSM	Inbound C&D Fines & Residuals	Inbound Bulky/DTM	Transfer to C&D Processor	Recycled/ Diverted	Recycling/ Diversion Rate (Current Method)	Recycling/ Diversion Rate (Proposed Method)
C&D Processor	85000	67000	7000	0	11000	1300	33000	39%	45%
C&D Transfer Station	73600	28000	7600	21000	17000	15000	4000	7%	11%

Announcements

Recycling Business Development Grant Application Reminder

- 2017 Recycling Business Development Grant program, <http://www.mass.gov/eea/agencies/massdep/recycle/grants/rbdg.html>
- **Application deadline: June 30, 2017**
- Targeted materials include two materials identified in 2016 C&D Market Study (DSM, May 2017)
 - C&D Wood
 - Post-Consumer Bulky Rigid Plastic
- Seek proposals
 - Technology/equipment that increases recovery of recycled materials (e.g. optical sorting for clean wood, etc.)
 - Advance new recycling markets

Recently completed C&D Studies

- 2016 C&D Debris Market Study Report (DSM, May 2017):
<http://www.mass.gov/eea/docs/dep/recycle/reduce/2016study.pdf>
 - Focused on performance of C&D processors
- Construction & Demolition Materials Guidance (RecyclingWorks, April 2017):
<https://recyclingworksma.com/construction-demolition-materials-guidance/>
 - BMPs for generators of C&D Materials

Other Announcements?

Next Steps/Closing

For More Information:

Point of Contact:

Mike Elliott

Asbestos/C&D Program Coordinator

MassDEP – Bureau of Air & Waste

One Winter Street

Boston, MA 02108

michael.elliott@state.ma.us

617-292-5575